



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,156	09/18/2006	Helmut Konopa	2003P00855W0US	9474
46726 7590 04/14/2011 BSH HOME APPLIANCES CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 100 BOSCH BOULEVARD NEW BERN, NC 28562				
EXAMINER				
ZEC, FILIP				
ART UNIT		PAPER NUMBER		
3785				
NOTIFICATION DATE		DELIVERY MODE		
04/14/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NBN-IntelProp@bshg.com

Office Action Summary

Application No.

10/560,156

Applicant(s)

KONOPA, HELMUT

Examiner

Filip Zec

Art Unit

3785

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 11, filed 2/4/2011, with respect to the rejection(s) of claim(s) 13-14 under 103(a) over Trask in view of Shima have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection of claims 13-14 is made under 103(a) over Trask in view of Marques. Claims 15-16 are now rejected under 103(a) over Trask in view of Marques, further in view of Shima. Newly added claim 37 is rejected under 103(a) over Trask in view of Kelly. This rejection is being made non-final to afford the applicants the opportunity to respond to the new grounds of rejection.
2. Applicant's arguments filed 2/4/2011, with respect to the rejections of claims 12 and 15-36 have been fully considered but they are not persuasive.

In reference to the applicant's arguments regarding the rejection of claim 12 under 102(b), page 9, Trask teaches an enclosure (70, FIG. 15 and 1, FIG. 1; col 9, line 21) comprising a compartment (36, FIG. 4), said enclosure located inside a storage compartment (space inside of the enclosure comprising the door depicted in FIG. 15) but separated from said storage compartment by said enclosure's walls on all sides, wherein said compartment contains the evaporator coil (45, FIG. 4) inside of it. As a matter of fact, the entire cooling system (compressor 37, condenser 38, expansion valve 51 and fan 46, FIG. 4 and 6) are located inside said enclosure (1, FIG. 1). Thus, the chamber is clearly separated from the space (compartment 36) containing the evaporator (45), as claimed in claim 12 and further in claim 21.

In response to applicant's argument, page 10, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., compressor inside the chamber, separated from the storage compartment) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In reference to the applicant's arguments regarding the rejection of claim 19, page 12, stating "Indeed, the stated rationale of selecting a particular speed related to the level of comfort has nothing to do with a no-frost refrigeration device since a person would not be inside the no-frost refrigeration device, and therefore, would not be concerned with a level of comfort inside the no-frost refrigeration device. For these reasons, the Baker reference does not remedy the deficiencies of the Trask reference, and therefore, the features of claim 19 are not rendered obvious from the alleged combination of references", the Examiner disagrees. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, Trask teaches an air conditioning unit, which can be used for cooling items placed inside of a storage space (FIG. 15). Thus, by combining the teachings of Baker, with Trask, specifically, the structure which controls the speed of the fan (FIG. 2 of Baker), one of ordinary skill in the art would find it obvious to control the temperature inside of the air conditioned space (enclosure in FIG. 15 of Trask), by varying the speed of said fan, wherein the high speed will result in convective cooling and a rapid lowering of inside temperature. Additionally, in

response to applicant's argument that Baker is nonanalogous art, page 13, second paragraph, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Baker teaches a selective temperature control system of an air conditioner and Trask teaches a humidity control system in an air conditioner and a refrigerator, which are both directly related to the claimed invention.

In response to applicant's argument regarding the rejection of claims 21-24 and 26-34, page 14, stating "that the Kelly et al. reference clearly is not within the field of Applicant's endeavor.", it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Kelly teaches a climate control system, i.e. an air conditioner, in a vehicle, while the applicant claims a climate control system for a refrigerator; said systems are clearly related. Further, the applicant argues, page 14, last paragraph, that "In the present instance, the subject matter of the Kelly et al. reference logically would not have commended itself to an inventor's attention in considering his or her invention as a whole.". Kelly teaches an antifogging system, which is a subsystem of a climate control apparatus; fogging is a form of humidification, thus, an antifogging system in Kelly is clearly and logically related to a dehumidification system, as claimed by the applicant. Additionally, applicant argues that Kelly teaches a different manner in

which the fan is controlled based on the various parameters, than what is claimed in the present invention, pages 15-16. The applicant is reminded that the teachings of Kelly, mainly using a measured relative humidity or moisture by the controller to offset blower motor speed, do not preclude the controller to offset said blower motor speed in a different manner (taught by Pesko, as explained in the rejection of claims 35 and 36). Kelly is simply teaching that there are numerous sensed inputs, including relative humidity (RELHUM), a reference temperature (REFTEMP), windglass temperature (WfNTEMP), outside air temperature (OAT), solar loading (SOLAR), passenger compartment air temperature (PCAT), a set temperature (SET) and discharge air temperature (DAT), which the microprocessor-based control unit 90 is responsive to (col 3, lines 5-13), that are used in order to effectively control the fog prevention or, more accurately, windshield glass dehumidification.

In reference to the applicant's arguments regarding the rejections of claim 25, page 17, mid page, in light of the response in the previous paragraphs, said arguments are non persuasive.

In response to applicant's argument regarding the rejection of claims 35 and 36, page 18, stating "that the Pesko et al. reference clearly is not within the field of Applicant's endeavor.", it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Pesko teaches an energy management system for buildings having a plurality of individually controlled spaces, i.e. a heating, ventilating and air conditioning (HVAC) system energy management, while the applicant claims a climate control system for a refrigerator; said systems are clearly related.

Further, the applicant argues, page 19, last paragraph, that “In the present instance, the subject matter of the Pesko et al. reference logically would not have commended itself to an inventor's attention in considering his or her invention as a whole.”. Pesko teaches an energy management system for an HVAC system employing evaporating heat exchangers and fans, wherein it is determined that more moisture is efficiently removed from the air when the fan is operated at a low speed than when it is operated at a high speed. Thus, one of ordinary skill in the art would find it obvious to utilize said teaching of Pesko and improve the system of Trask and Kelly by lowering the fan speed (in system of Trask) while utilizing various air conditioning inputs in factoring the humidity of the system (sensors and controller of Kelly), in order to provide a dehumidifier that is both cost efficient and effective (Pesko).

Rejections remain as stated.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 12 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 2,549,547 to Trask (Trask).

In reference to claim 12, Trask discloses a no-frost refrigeration device (FIG. 15, with the refrigeration producer inside of cabinet 70, described in detail in FIG. 4-7; max temperature over the frosting point; col 9, lines 35-37), comprising a storage compartment (enclosure in FIG. 15; col 9, line 21); an evaporator (45, FIG. 4) which is alternately activated and deactivated (col 7,

lines 3-10; inherently corresponding to the work of condenser since the temperature of the refrigerant in the evaporator is controlled by the condenser; col 7, lines 35-37), and located in a chamber (space inside of 70, FIG. 15) separated from said storage compartment (enclosure in FIG. 15; col 9, line 21); a fan (46, FIG. 4); and a control circuit (FIG. 7) which makes an average circulation power of said fan variable (58, FIG. 7) during an activation phase of said evaporator (relay 56, FIG. 7) based on at least one air conditioning parameter (humidity; col 6, lines 63-75 and col 7, lines 1-5).

In reference to claim 17, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 12, and Trask also teaches that said activation phase of said evaporator and said fan can be set to different non-zero speeds (col 7, lines 19-30; capable of being set).

In reference to claim 18, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 17, and Trask also teaches that said control circuit for controlling the operation of said evaporator and said fan is set to operate said fan (46, FIG. 4) at one of a plurality of selectable non-zero speeds when said evaporator is activated (col 7, lines 19-30; capable of being operating per circuit in FIG. 7).

In reference to claim 20, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 18, and Trask also teaches said control circuit (61, FIG. 7) is coupled to an air conditioning sensor (humidistat 57, FIG. 7) that records the at least one air conditioning parameter (humidity; col 5, line 13-15) and said control circuit regulates the speed of said fan using the at least one air conditioning parameter recorded by said sensor (col 6, lines 63-75 and col 7, lines 1-5).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trask in view of U. S. Patent 5,490,394 to Marques et al. (Marques).

In reference to claim 13, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 12, and but Trask does not teach that said fan that can be switched off temporarily during said activation phase of said evaporator. Marques teaches a fan control system for the evaporator of refrigerating appliances (FIG. 1-3) wherein the activation of the compressor (40, FIG. 1) by the respective thermostat will not cause the activation of the fan 20, which will remain inactive, until there is detected again a certain minimum temperature difference between the air admitted into the evaporator 30 and the inside of the appliance, by the first and second sensors (S1 and S2, FIG. 2) and electronic circuit (50, FIG. 2), which maintains the fan inactive when the compressor starts a new operative cycle (col 4, lines 15-27) in order to allow the evaporator to cool faster and avoid the dissipation of heat from the fan motor, until the evaporator is sufficiently cooled (col , lines 8-10).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, to allow the fan to be turned off during the activation of the evaporator, as taught by Marques, in order to allow the evaporator to cool

faster and avoid the dissipation of heat from the fan motor, until the evaporator is sufficiently cooled.

In reference to claim 14, Trask and Marques disclose the no-frost refrigeration device as explained in the rejection of claim 13, and Trask teaches that the control circuit controls the operation of the evaporator (col 6, lines 45-55) and the fan set up to intermittently (interpreted as a variable, non-constant operation) operate the fan during the activation phase of the evaporator (fan 46, driven by a variable speed fan motor 47; col 6, lines 29-30).

7. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trask in view of Marques, as explained in the rejection of claim 14 above, and further in view of U. S. Patent 5,931,011 to Shima et al. (Shima).

In reference to claims 15, Trask and Marques disclose the no-frost refrigeration device as explained in the rejection of claim 14, but they do not teach a selector switch on which a duty cycle can be set for said intermittent operation of said fan. Shima teaches a saving switch (25, FIG. 2), which executes the main program of the freezing cycle (col 4, line 67) and inherently controls the operation of the dryer (16, FIG. 2) in order to automatically reduce consumption of the electric power in a reliable manner (col 7, lines 1-10 and 20-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask and Marques, to include a saving switch, which executes the main program of the freezing cycle and inherently controls the operation of the dryer, as taught by Shima, in order to automatically reduce consumption of the electric power in a reliable manner.

In reference to claim 16, Trask and Marques disclose the no-frost refrigeration device as explained in the rejection of claim 14, and Trask also teaches said control circuit (61, FIG. 7) is coupled to an air conditioning sensor (humidistat 57, FIG. 7) that records the at least one air conditioning parameter (humidity; col 5, line 13-15), but does not teach that said control circuit regulates a duty cycle as a function of the at least one air conditioning parameter recorded by a sensor. Shima teaches a thermoswitch (23, FIG. 2), which initiates the main program of the freezing cycle (col 4, line 67) and controls the operation of the dryer (16, FIG. 2) based on the air conditioning parameter (temperature of the cabinet; col 5, lines 20-25) in order to automatically reduce consumption of the electric power in a reliable manner (col 7, lines 1-10 and 20-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask and Marques, to include a thermoswitch which initiates the main program of the freezing cycle and controls the operation of the dryer based on the air conditioning parameter, as taught by Shima, in order to automatically reduce consumption of the electric power in a reliable manner.

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trask in view of U.S. Patent 4,315,413 to Baker (Baker).

In reference to claim 19, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 18, but does not teach a selector switch on which a speed for operation of said fan can be set. Baker teaches a selective temperature control system (FIG. 2), wherein by using "fan only" button (44, FIG. 2), in conjunction with the high speed (or "HI") button (43, FIG. 2) or the medium speed ("MED") button (45, FIG. 2) or the low speed ("LOW") button (47,

FIG. 2) the fan (26, FIG. 1) is energized at the particular speed selected in order to provide a user friendly system available for selecting a particular speed related to the level of comfort.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, and have the speed of the fan controlled based on the user input, as taught by Baker, in order to provide a user friendly system available for selecting a particular speed related to the level of comfort.

9. Claims 21-24, 26-34 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trask in view of U.S. Patent 6,508,408 to Kelly et al. (Kelly).

In reference to claims 28 and 30, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 12, but Trask does not teach that the at least one air conditioning parameter is a moisture value of one of ambient air and a temperature of ambient air outside the no-frost refrigeration device. Kelly teaches a system for controlling the climate control system in a vehicle (col 1, lines 50-52) wherein the measured relative humidity or moisture (94, FIG. 1; col 1, lines 55-57) and outside air temperature (col 3, lines 5-13) are used by the controller (90, FIG. 1) to offset blower motor speed (43, FIG. 1; col 1, lines 55-63) in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect (col 1, lines 43-47). It is noted that the air moisture and air humidity are considered to be the equivalent factor.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, and have the fan controlled based on the measured humidity outside the cooled enclosure, as taught by Kelly, in order to automatically

adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect.

In reference to claim 29, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 12, and Trask does not teaches that the at least one air conditioning parameter is an estimated moisture value of air in the at least one storage compartment (humidity; col 5, line 13-15), but does not teach that the at least one air conditioning parameter is an estimated moisture value of one of ambient air. Kelly teaches a system for controlling the climate control system in a vehicle (col 1, lines 50-52) wherein the air dew point temperature is estimated based on a value of relative humidity or moisture (col 1, lines 55-57) and subsequently use said value to offset blower motor speed (col 1, lines 55-63) in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect (col 1, lines 43-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, and have the fan controlled based on the estimated moisture outside the cooled enclosure, as taught by Kelly, in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect.

In reference to claim 31, Trask discloses the no-frost refrigeration device as explained in the rejection of claim 12, and Trask also teaches that the control circuit makes the average circulation power of said fan variable during the activation phase of said evaporator based on the at least one air conditioning parameter (as explained in the rejection of claim 12 above), but does not teach to use a predefined target value of a humidity of air in the at least one storage

compartment as basis for controlling the fan. Kelly teaches a system for controlling the climate control system in a vehicle (col 1, lines 50-52) wherein the air dew point temperature is estimated based on a value of relative humidity or moisture (col 1, lines 55-57) and subsequently use said value to offset blower motor speed (col 1, lines 55-63) in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect (col 1, lines 43-47).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, wherein the fan is controlled based on the humidity outside the cooled enclosure, as taught by Kelly, in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect.

In reference to claims 21-24, 26-27 and 32-34, they claim the method of providing and configuring the apparatus of claims 28-31, thus, they are rejected based on the rejection of claims 28-31 above and the associated method steps follow directly from the use of the apparatus.

In reference to claim 37, Trask teaches a no-frost refrigeration device (FIG. 15, with the refrigeration producer inside of cabinet 70, described in detail in FIG. 4-7; max temperature over the frosting point; col 9, lines 35-37), comprising at least one storage compartment (enclosure in FIG. 15; col 9, line 21); an evaporator chamber (36, FIG. 4) that is separated from the storage compartment; an evaporator (45, FIG. 4) which is alternately activated and deactivated (col 7, lines 3-10; inherently corresponding to the work of condenser since the temperature of the refrigerant in the evaporator is controlled by the condenser; col 7, lines 35-37) located in the evaporator chamber; a fan (46, FIG. 4) that circulates air between the storage compartment and

the evaporator chamber; a control circuit (FIG. 7) which makes an average circulation power of the fan variable (58, FIG. 7) during an activation phase of the evaporator (relay 56, FIG. 7) based on at least one air conditioning parameter (humidity; col 6, lines 63-75 and col 7, lines 1-5); and at least one air conditioning sensor (humidistat 57, FIG. 7) that records the at least one air conditioning parameter (humidity; col 5, line 13-15), wherein the at least one air conditioning parameter is a moisture value of one of ambient air and air in the at least one storage compartment, wherein the control circuit intermittently operates the fan during the activation phase of the evaporator (col 6, lines 63-75 and col 7, lines 1-5), and wherein the control circuit (61, FIG. 7) is coupled to the at least one air conditioning sensor (humidistat 57, FIG. 7) and the control circuit regulates the speed of the fan using the at least one air conditioning parameter recorded by the sensor (col 6, lines 63-75 and col 7, lines 1-5), wherein said air conditioning parameter is air in the at least one storage compartment (humidity; col 5, line 13-15), but does not teach that the at least one air conditioning parameter is a moisture value of one of ambient air. Kelly teaches a system for controlling the climate control system in a vehicle (col 1, lines 50-52) wherein the measured relative humidity or moisture (94, FIG. 1; col 1, lines 55-57) is used by the controller (90, FIG. 1; col 3, lines 5-13) to offset blower motor speed (43, FIG. 1; col 1, lines 55-63) in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect (col 1, lines 43-47). It is noted that the air moisture and air humidity are considered to be the equivalent factor.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, and have the fan controlled based on the

measured humidity outside of the cooled enclosure, as taught by Kelly, in order to automatically adjust the operation of a climate control setting without producing unnecessarily abrupt or large deviations from the climate control setting otherwise in effect.

10. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Trask in view of Kelly as applied to claim 21 above, and further in view of Shima.

In reference to claim 25, Trask and Kelly teach the method as explained in the rejection of claim 21 above, and Trask also teaches said control circuit (61, FIG. 7) is coupled to an air conditioning sensor (humidistat 57, FIG. 7) that records the at least one air conditioning parameter (humidity; col 5, line 13-15), but does not teach that said control circuit regulates a duty cycle as a function of the at least one sensed by the air conditioning parameter. Shima teaches a thermoswitch (23, FIG. 2), which initiates the main program of the freezing cycle (col 4, line 67) and controls the operation of the dryer (16, FIG. 2) based on the air conditioning parameter (temperature of the cabinet; col 5, lines 20-25) in order to automatically reduce consumption of the electric power in a reliable manner (col 7, lines 1-10 and 20-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Trask and Kelly, to include a thermoswitch which initiates the main program of the freezing cycle and controls the operation of the dryer based on the air conditioning parameter, as taught by Shima, in order to automatically reduce consumption of the electric power in a reliable manner..

11. Claims 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trask in view of U.S. Patent 6,290,140 to Pesko et al. (Pesko).

In reference to claim 35, Trask discloses the refrigeration device as explained in the rejection of claim 12, but does not teach that the control circuit decreases the average circulation power of the fan during the activation phase of the evaporator when the moisture value is greater than a moisture value constant. Pesko teaches an energy management system and method wherein it is determined that more moisture is removed from the air when the fan is operated at a low speed than when it is operated at a high speed (col 12, lines 58-60). Thus, the humidity and cooling of temperature controlled space can be independently traded off by increasing and decreasing the respective fan speeds, respectively, based on the sensed humidity (col 12, lines 65-67 and col 13, lines 1-6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, to decrease the power of the fan when the sensed humidity is higher, as taught by Pesko, in order to optimize the work of the fan during the dehumidifying process.

In reference to claim 36, Trask discloses the refrigeration device as explained in the rejection of claim 12, but does not teach that the control circuit selectively decreases the average circulation power of the fan during the activation phase of the evaporator when the moisture value is greater than a moisture value constant, and increases the average circulation power of the fan during the activation phase of the evaporator when the moisture value is less than the moisture value constant. Pesko teaches an energy management system and method wherein it is determined that more moisture is removed from the air when the fan is operated at a low speed than when it is operated at a high speed (col 12, lines 58-60). Thus, the humidity and cooling of temperature controlled space can be independently traded off by increasing and decreasing the

respective fan speeds, respectively, based on the sensed humidity (col 12, lines 65-67 and col 13, lines 1-6).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Trask, to decrease the power of the fan when the sensed humidity is higher and increase the power of the fan when the sensed humidity is lower, as taught by Pesko, in order to optimize the work of the fan during the dehumidifying process.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 5,355,686 to Weiss teaches a dual temperature control of refrigerator-freezer.

U.S. Patent 3,998,068 to Chirnside teaches a fan delay humidistat.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Filip Zec whose telephone number is 571-270-5846. The examiner can normally be reached on Monday-Friday, from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JJ Swan can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J J Swann/
Supervisory Patent Examiner, Art Unit 3785

/F. Z./
Examiner, Art Unit 3785

4/1/2011